

AMENDMENTS TO THE CLAIMS

1. (Original) A polymer comprising an optionally substituted repeat unit of formula (I):



(I)

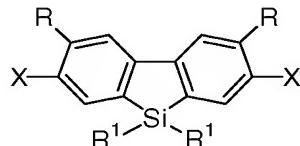
wherein each R is the same or different and represents H or an electron withdrawing group; and each R¹ is the same or different and represents a substituent.

2. (Previously presented) A polymer according to claim 1 wherein at least one R¹ is a solubilizing group.

3. (Previously presented) A polymer according to claim 1 wherein each R¹ is the same or different and is independently selected from the group consisting of optionally substituted C₁₋₂₀ alkyl, C₁₋₂₀ alkoxy, aryl and heteroaryl groups.

4. (Previously presented) A polymer according to claim 1 comprising an optionally substituted aryl or heteroaryl second repeat unit.

5. (Withdrawn) A monomer comprising a repeat unit of formula (II):



(II)

wherein each R is the same or different and represents H or an electron withdrawing group; and each R¹ is the same or different and represents a substituent and each X independently represents a polymerizable group.

6. (Withdrawn) A monomer according to claim 5 wherein each X is the same or different and is selected from the group consisting of boronic acid groups, boronic ester groups, borane groups, and halide functional groups.

7. (Withdrawn) A method of forming a polymer comprising the step of polymerizing a monomer according to claim 5.

8. (Withdrawn) A method according to claim 7 wherein each X is the same or different and is a halide functional group, and comprising performing the polymerization in the presence of a nickel complex catalyst.

9. (Withdrawn) A method according to claim 7 comprising the step of polymerizing:

(a) a monomer of formula (II) wherein each X is the same or different and is a boron derivative functional group selected from the group consisting of boronic acid, boronic esters, and boranes, and an aromatic monomer having at least two reactive halide functional groups; or

(b) a monomer of formula (II) wherein each X is the same or different and is a reactive halide functional group, and an aromatic monomer having at least two boron derivative functional group selected from the group consisting of boronic acid, boronic esters, and boranes; or

(c) a monomer of formula (II) wherein one X is a reactive halide functional group and the other X is a boron derivative functional group selected from the group consisting of boronic acid, boronic esters, and boranes,

wherein the reaction mixture comprises a catalytic amount of a palladium catalyst suitable for catalyzing the polymerization of the aromatic monomers, and a base in an amount sufficient to convert the boron derivative functional groups into boronate anionic groups.

10. (Withdrawn) An optical device comprising a polymer according to claim 1.

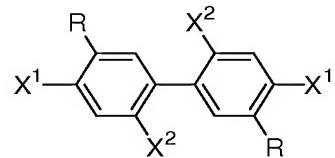
11. (Withdrawn) An optical device according to claim 10 comprising an anode, a cathode and a layer of the polymer disposed between the anode and the cathode.

12. (Previously presented) An optical device according to claim 11 comprising an electroluminescent device.

13. (Withdrawn) A switching device comprising a polymer according to claim 1.

14. (Withdrawn) A switching device according to claim 13 comprising a thin film transistor.

15. (Withdrawn) An optionally substituted compound of formula (IV):



(IV)

wherein R is the same or different and represents H or an electron withdrawing group; each X^1 and each X^2 are the same or different and represent a leaving group capable of participating in a transmetallation reaction and X^2 has an electronegativity less than that of X^1 .

16. (Withdrawn) The compound of claim 15, wherein each X^1 and X^2 is independently a halogen.

17. (Withdrawn) A method of forming a monomer of formula (VI) from a compound of formula (V) according to the following scheme:



wherein the method comprises reacting the compound of formula (V) with a transmetallating agent followed by reaction with a compound of formula LG-Y-LG, wherein X^1 is a leaving group capable of participating in a transmetallation reaction and R is H or an electron withdrawing group; each X^3 is the same or different and represents a leaving group capable of participating in a transmetallation having an electronegativity less than or the same as that of X^1 ; Y represents a divalent residue comprising a backbone of 1-3 atoms; and each LG is the same or different and represents a leaving group.

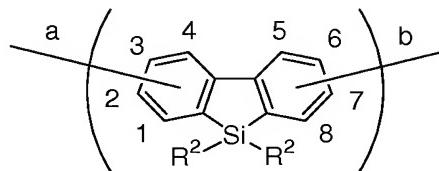
18. (Withdrawn) A method according to claim 17 wherein Y comprises a single atom in its backbone selected from the group consisting of $-CR^3_2-$, $-SiR^3_2-$, $-NR^3-$, $-PR^3-$, $-GeR^3_2-$, $-SnR^3_2-$, O, and S, wherein R^3 is selected from the group consisting of optionally substituted alkyl, alkoxy, aryl, and heteroaryl.

19. (Withdrawn) A method according to claim 17 wherein each X^3 is the same or different and has an electronegativity less than that of X^1 .

20. (Withdrawn) A method according to claim 17 wherein each LG is the same or different and is a halogen.

21. (Withdrawn) A method according to claim 17 wherein the transmetallating agent is a compound of formula R⁴-M wherein R⁴ is alkyl or aryl and M is a metal.

22. (Withdrawn) A polymer comprising an optionally substituted first repeat unit of formula (VII):



(VII)

wherein each R² is the same or different and represents a substituent; the R² groups may be linked to form a ring; and bond (a) is not linked to the 2-position of the repeat unit of formula (VII).

23. (Withdrawn) A polymer according to claim 22 wherein bond (b) is not bound to the 7-position of the repeat unit of formula (VII).

24. (Withdrawn) A polymer according to claim 22 wherein bond (a) is bound to the 3-position of the repeat unit of formula (VII).

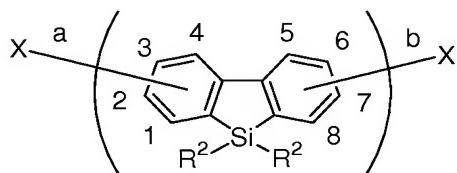
25. (Withdrawn) A polymer according to claim 22 wherein bond (b) is bound to the 6-position of the repeat unit of formula (VII).

26. (Withdrawn) A polymer according to claim 22 wherein at least one R² is a solubilising group.

27. (Withdrawn) A polymer according to claim 22 wherein each R² is the same or different and is selected from the group consisting of optionally substituted C₁₋₂₀ alkyl, C₁₋₂₀ alkoxy, aryl and heteroaryl.

28. (Withdrawn) A polymer according to claim 22 wherein the polymer comprises an optionally substituted aryl or heteroaryl second repeat unit.

29. (Withdrawn) An optionally substituted monomer of formula (VIII):



(VIII)

wherein each R² is the same or different and represents a substituent; each X independently represents a polymerizable group and at least one X is not linked to the 2-position of the repeat unit of formula (VIII).

30. (Withdrawn) An electroluminescent device comprising an anode, a cathode and an electroluminescent layer located between the anode and cathode wherein the electroluminescent layer comprises a polymeric host material comprising an optionally substituted first repeat unit of formula (IX) and a luminescent dopant



(IX)

wherein R¹ is the same or different and represents a substituent.

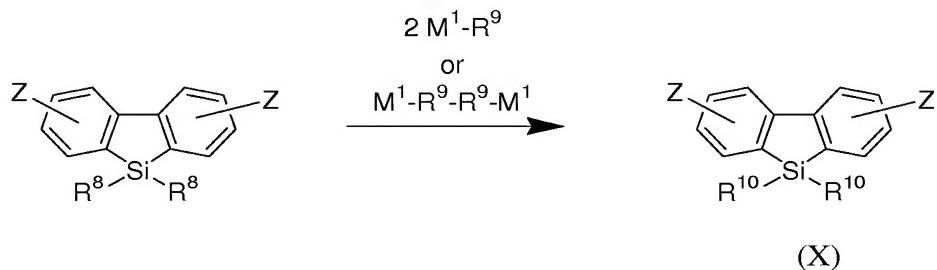
31. (Withdrawn) An electroluminescent device according to claim 30 wherein the repeat unit of formula (IX) is linked through its 3- and 6- positions.

32. (Withdrawn) An electroluminescent device according to claim 30 wherein the polymeric host material comprises a second repeat unit.

33. (Withdrawn) An electroluminescent device according to claim 30 wherein the second repeat unit comprises a hole transporting material.

34. (Withdrawn) An electroluminescent device according to claim 30 wherein the luminescent dopant is phosphorescent.

35. (Withdrawn) A method of forming an optionally substituted compound of formula (X) according to the following process:



wherein each R^8 is independently selected from the group consisting of C_{1-20} alkyl and aryl; each R^9 is different from R^8 and is independently selected from the group consisting of C_{1-20} alkyl, aryl and heteroaryl; M^1 is a metal; and Z is a reactive group capable of undergoing reaction with M^1-R^9 .

36. (Withdrawn) A method according to claim 35 wherein M^1 is lithium.

37. (Withdrawn) A method according to claim 35 wherein R^8 is methyl.

38. (Withdrawn) A method according to claim 35 wherein Z is trialkylsilyl.

39. (Withdrawn) A method according to claim 35 wherein, in the case of reaction with M¹-R⁹, the two groups R¹⁰ are not linked to form a ring.

40. (Withdrawn) A polymer according to claim 22, wherein R² is a C₄₋₁₀ alkyl group.

41. (Withdrawn) A polymer according to claim 40, wherein R² is a n-hexyl group or an n-octyl group.

42. (Withdrawn) A method according to claim 35, wherein Z is trimethylsilyl.